

APPENDIX D

COST ANALYSIS WORKSHEETS A AND B

ALTERNATIVE 2

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000	X	\$2,000
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$37,000
Unmodified Barrier Allowance				\$481,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 56
Mile Post: 0.0/2.5
ALT 2

Barrier Name or ID	S27
Barrier Height (feet)	14-16
Critical Design Receiver	R6A
Number of benefited Residences	13
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	64
Future Noise Level (dBA)	69
Change in Noise Level (dB)	5
Noise Level with Abatement (dBA)	63
Barrier Insertion Loss (dB)	6

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000	X	\$4,000
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000	X	\$4,000
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$41,000
Unmodified Barrier Allowance				\$82,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 56
Mile Post: 0.0/2.5
ALT 2

Barrier Name or ID	S31
Barrier Height (feet)	8
Critical Design Receiver	R14
Number of benefited Residences	2
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	64
Future Noise Level (dBA)	71
Change in Noise Level (dB)	7
Noise Level with Abatement (dBA)	62
Barrier Insertion Loss (dB)	9

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				<input type="checkbox"/>
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	<input type="checkbox"/>
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	<input type="checkbox"/>
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	<input type="checkbox"/>
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000	X	\$2,000
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	<input type="checkbox"/>
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$37,000
Unmodified Barrier Allowance				\$1,295,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 56
Mile Post: 0.0/2.5
ALT 2

Barrier Name or ID	S35
Barrier Height (feet)	10-12
Critical Design Receiver	R18
Number of benefited Residences	35
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	65
Future Noise Level (dBA)	68
Change in Noise Level (dB)	3
Noise Level with Abatement (dBA)	62
Barrier Insertion Loss (dB)	6

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0	X	\$0
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$33,000
Unmodified Barrier Allowance				\$231,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 56
Mile Post: 0.0/2.5
ALT 2

Barrier Name or ID	S41
Barrier Height (feet)	12
Critical Design Receiver	R29B
Number of benefited Residences	7
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	64
Future Noise Level (dBA)	66
Change in Noise Level (dB)	2
Noise Level with Abatement (dBA)	61
Barrier Insertion Loss (dB)	5

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000	X	\$2,000
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$35,000
Unmodified Barrier Allowance				\$385,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 56
Mile Post: 0.0/2.5
ALT 2

Barrier Name or ID	S47
Barrier Height (feet)	10-14
Critical Design Receiver	R32
Number of benefited Residences	11
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	67
Future Noise Level (dBA)	68
Change in Noise Level (dB)	1
Noise Level with Abatement (dBA)	62
Barrier Insertion Loss (dB)	6

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000	X	\$2,000
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$37,000
Unmodified Barrier Allowance				\$259,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 56
Mile Post: 0.0/2.5
ALT 2

Barrier Name or ID	S20
Barrier Height (feet)	12-16
Critical Design Receiver	R45
Number of benefited Residences	7
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	65
Future Noise Level (dBA)	69
Change in Noise Level (dB)	4
Noise Level with Abatement (dBA)	61
Barrier Insertion Loss (dB)	8

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000	X	\$4,000
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000	X	\$4,000
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000	X	\$10,000
No on both	Add	\$0		-
Reasonable Allowance for Benefited Residence				\$51,000
Unmodified Barrier Allowance				\$102,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 56
Mile Post: 0.0/2.5
ALT 2

Barrier Name or ID	S34
Barrier Height (feet)	8-10
Critical Design Receiver	R46
Number of benefited Residences	2
New Hwy Construction	No
Pre 1978 residences	Yes
Existing Noise Level (dBA)	66
Future Noise Level (dBA)	71
Change in Noise Level (dB)	5
Noise Level with Abatement (dBA)	60
Barrier Insertion Loss (dB)	11

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000	X	\$4,000
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000	X	\$2,000
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000	X	\$10,000
No on both	Add	\$0		-
Reasonable Allowance for Benefited Residence				\$49,000
Unmodified Barrier Allowance				\$98,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 56
Mile Post: 0.0/2.5
ALT 2

Barrier Name or ID	S34 OPT
Barrier Height (feet)	12-14
Critical Design Receiver	R46
Number of benefited Residences	2
New Hwy Construction	No
Pre 1978 residences	Yes
Existing Noise Level (dBA)	66
Future Noise Level (dBA)	71
Change in Noise Level (dB)	5
Noise Level with Abatement (dBA)	63
Barrier Insertion Loss (dB)	8






Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Table B-2.

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000	X	\$4,000
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000	X	\$2,000
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$37,000
Unmodified Barrier Allowance				\$37,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 2

Barrier Name or ID	S539
Barrier Height (feet)	8
Critical Design Receiver	R4.1
Number of benefited Residences	1
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	70
Future Noise Level (dBA)	72
Change in Noise Level (dB)	2
Noise Level with Abatement (dBA)	64
Barrier Insertion Loss (dB)	8

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				<input type="checkbox"/>
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	<input type="checkbox"/>
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000	X	\$6,000
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	<input type="checkbox"/>
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	<input type="checkbox"/>
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000	X	\$6,000
4. Either New Construction or Pre-date 1978?			check one	<input type="checkbox"/>
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$45,000
Unmodified Barrier Allowance				\$225,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 2

Barrier Name or ID	S541
Barrier Height (feet)	8-14
Critical Design Receiver	R4.4
Number of benefited Residences	5
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	70
Future Noise Level (dBA)	75
Change in Noise Level (dB)	5
Noise Level with Abatement (dBA)	63
Barrier Insertion Loss (dB)	12

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000	X	\$8,000
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000	X	\$4,000
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000	X	\$4,000
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000	X	\$10,000
No on both	Add	\$0		-
Reasonable Allowance for Benefited Residence				\$57,000
Unmodified Barrier Allowance				\$1,368,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 2

Barrier Name or ID	S545
Barrier Height (feet)	8-16
Critical Design Receiver	R4.9
Number of benefited Residences	24
New Hwy Construction	No
Pre 1978 residences	Yes
Existing Noise Level (dBA)	68
Future Noise Level (dBA)	79
Change in Noise Level (dB)	11
Noise Level with Abatement (dBA)	70
Barrier Insertion Loss (dB)	9

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000	X	\$2,000
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000	X	\$10,000
No on both	Add	\$0		-
Reasonable Allowance for Benefited Residence				\$45,000
Unmodified Barrier Allowance				\$810,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 2

Barrier Name or ID	S551
Barrier Height (feet)	14-16
Critical Design Receiver	R4.17A
Number of benefited Residences	18
New Hwy Construction	No
Pre 1978 residences	Yes
Existing Noise Level (dBA)	66
Future Noise Level (dBA)	68
Change in Noise Level (dB)	2
Noise Level with Abatement (dBA)	62
Barrier Insertion Loss (dB)	6

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000	X	\$6,000
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000	X	\$4,000
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000	X	\$4,000
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000	X	\$10,000
No on both	Add	\$0		-
Reasonable Allowance for Benefited Residence				\$55,000
Unmodified Barrier Allowance				\$220,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 2

Barrier Name or ID	S555
Barrier Height (feet)	8
Critical Design Receiver	R4.21A
Number of benefited Residences	4
New Hwy Construction	No
Pre 1978 residences	Yes
Existing Noise Level (dBA)	68
Future Noise Level (dBA)	78
Change in Noise Level (dB)	10
Noise Level with Abatement (dBA)	67
Barrier Insertion Loss (dB)	11

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000	X	\$8,000
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000	X	\$4,000
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$45,000
Unmodified Barrier Allowance				\$450,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 2

Barrier Name or ID	S557
Barrier Height (feet)	8-10
Critical Design Receiver	R4.23A
Number of benefited Residences	10
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	77
Future Noise Level (dBA)	80
Change in Noise Level (dB)	3
Noise Level with Abatement (dBA)	70
Barrier Insertion Loss (dB)	10

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000	X	\$6,000
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000	X	\$4,000
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$41,000
Unmodified Barrier Allowance				\$246,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 2

Barrier Name or ID	S561
Barrier Height (feet)	8
Critical Design Receiver	R5.1
Number of benefited Residences	6
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	75
Future Noise Level (dBA)	76
Change in Noise Level (dB)	1
Noise Level with Abatement (dBA)	65
Barrier Insertion Loss (dB)	11

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000	X	\$2,000
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000	X	\$10,000
No on both	Add	\$0		-
Reasonable Allowance for Benefited Residence				\$47,000
Unmodified Barrier Allowance				\$188,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 2

Barrier Name or ID	S563
Barrier Height (feet)	8
Critical Design Receiver	R5.5A
Number of benefited Residences	4
New Hwy Construction	No
Pre 1978 residences	Yes
Existing Noise Level (dBA)	63
Future Noise Level (dBA)	69
Change in Noise Level (dB)	6
Noise Level with Abatement (dBA)	61
Barrier Insertion Loss (dB)	8

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000	X	\$4,000
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000	X	\$4,000
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000	X	\$10,000
No on both	Add	\$0		-
Reasonable Allowance for Benefited Residence				\$49,000
Unmodified Barrier Allowance				\$637,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 2

Barrier Name or ID	S567
Barrier Height (feet)	8
Critical Design Receiver	R5.7
Number of benefited Residences	13
New Hwy Construction	No
Pre 1978 residences	Yes
Existing Noise Level (dBA)	72
Future Noise Level (dBA)	74
Change in Noise Level (dB)	2
Noise Level with Abatement (dBA)	63
Barrier Insertion Loss (dB)	11

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0	X	\$0
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000	X	\$10,000
No on both	Add	\$0		-
Reasonable Allowance for Benefited Residence				\$43,000
Unmodified Barrier Allowance				\$129,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 2

Barrier Name or ID	S569
Barrier Height (feet)	8-14
Critical Design Receiver	R5.9A
Number of benefited Residences	3
New Hwy Construction	No
Pre 1978 residences	Yes
Existing Noise Level (dBA)	67
Future Noise Level (dBA)	67
Change in Noise Level (dB)	0
Noise Level with Abatement (dBA)	62
Barrier Insertion Loss (dB)	5

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000	X	\$4,000
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000	X	\$6,000
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$41,000
Unmodified Barrier Allowance				\$410,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 2

Barrier Name or ID	S568
Barrier Height (feet)	8-12
Critical Design Receiver	R5.23
Number of benefited Residences	10
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	69
Future Noise Level (dBA)	70
Change in Noise Level (dB)	1
Noise Level with Abatement (dBA)	58
Barrier Insertion Loss (dB)	12

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

County: **San Diego**
Project Exp Auth: **11-177900**

Route: **I-5/SR56**

Mile Post: **MP 32.7/34.8 / 0.0/2.5**

Program Code: **Alternative 2**

Construction cost without abatement: **\$281,000,000**

1	2	3	4	5	6	7	8
From Worksheet A				Adjusted Barrier Allowance vs Construction Cost	Percentage of Total Barrier Allowance	Modified Barrier Allowance	Modified Allowance per Benefited Residence
Barrier ID	Adjusted Allowance for Critical Design Receiver a_i	Number of Benefited Residences n_i	Adjusted Unmodified Barrier Allowance $A_i = a_i \times n$		(col 4: $A / \Sigma A$)	($A / \Sigma A \times 0.5 \times$ Const Cost)	(col 7 /col 3)
S27	\$37,000	13	\$481,000	If the total in column 4 is equal to or less than 50% of construction cost without abatement, no adjustment is necessary, otherwise continue to next three columns.	N/A	N/A	N/A
S31	\$41,000	2	\$82,000		N/A	N/A	N/A
S35	\$37,000	35	\$1,295,000		N/A	N/A	N/A
S41	\$33,000	7	\$231,000		N/A	N/A	N/A
S47	\$35,000	11	\$385,000		N/A	N/A	N/A
S20	\$37,000	7	\$259,000		N/A	N/A	N/A
S34	\$51,000	2	\$102,000		N/A	N/A	N/A
S539	\$37,000	1	\$37,000		N/A	N/A	N/A
S541	\$45,000	5	\$225,000		N/A	N/A	N/A
S545	\$57,000	24	\$1,368,000		N/A	N/A	N/A
S551	\$45,000	18	\$810,000		N/A	N/A	N/A
S555	\$55,000	4	\$220,000		N/A	N/A	N/A
S557	\$45,000	10	\$450,000		N/A	N/A	N/A
S561	\$41,000	6	\$246,000		N/A	N/A	N/A
S563	\$47,000	4	\$188,000		N/A	N/A	N/A
S567	\$49,000	13	\$637,000		N/A	N/A	N/A
S569	\$43,000	3	\$129,000		N/A	N/A	N/A
S568	\$41,000	10	\$410,000		N/A	N/A	N/A
	Totals	175	\$7,555,000				

County: **San Diego**
Project Exp Auth: **11-177900**

Route: **I-5/SR56**

Mile Post: **MP 32.7/34.8 / 0.0/2.5**

Program Code: **Alternative 2**
S34 Option

Construction cost without abatement: **\$281,000,000**

1	2	3	4	5	6	7	8
From Worksheet A				Adjusted Barrier Allowance vs Construction Cost	Percentage of Total Barrier Allowance	Modified Barrier Allowance	Modified Allowance per Benefited Residence
Barrier ID	Adjusted Allowance for Critical Design Receiver a_i	Number of Benefited Residences n_i	Adjusted Unmodified Barrier Allowance $A_i = a_i \times n$		(col 4: $A / \Sigma A$)	($A / \Sigma A \times 0.5 \times$ Const Cost)	(col 7 /col 3)
S27	\$37,000	13	\$481,000	If the total in column 4 is equal to or less than 50% of construction cost without abatement, no adjustment is necessary, otherwise continue to next three columns.	N/A	N/A	N/A
S31	\$41,000	2	\$82,000		N/A	N/A	N/A
S35	\$37,000	35	\$1,295,000		N/A	N/A	N/A
S41	\$33,000	7	\$231,000		N/A	N/A	N/A
S47	\$35,000	11	\$385,000		N/A	N/A	N/A
S20	\$37,000	7	\$259,000		N/A	N/A	N/A
S34 OPT	\$49,000	2	\$98,000		N/A	N/A	N/A
S539	\$37,000	1	\$37,000		N/A	N/A	N/A
S541	\$45,000	5	\$225,000		N/A	N/A	N/A
S545	\$57,000	24	\$1,368,000		N/A	N/A	N/A
S551	\$45,000	18	\$810,000		N/A	N/A	N/A
S555	\$55,000	4	\$220,000		N/A	N/A	N/A
S557	\$45,000	10	\$450,000		N/A	N/A	N/A
S561	\$41,000	6	\$246,000		N/A	N/A	N/A
S563	\$47,000	4	\$188,000		N/A	N/A	N/A
S567	\$49,000	13	\$637,000		N/A	N/A	N/A
S569	\$43,000	3	\$129,000		N/A	N/A	N/A
S568	\$41,000	10	\$410,000		N/A	N/A	N/A
	Totals	175	\$7,551,000				

ALTERNATIVE 3

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000	X	\$2,000
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$37,000
Unmodified Barrier Allowance				\$407,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 56
Mile Post: 0.0/2.5
ALT 3

Barrier Name or ID	S27
Barrier Height (feet)	14-16
Critical Design Receiver	R6
Number of benefited Residences	11
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	63
Future Noise Level (dBA)	67
Change in Noise Level (dB)	4
Noise Level with Abatement (dBA)	61
Barrier Insertion Loss (dB)	6

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000	X	\$4,000
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000	X	\$4,000
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence			\$41,000	
Unmodified Barrier Allowance			\$82,000	
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 56
Mile Post: 0.0/2.5
ALT 3

Barrier Name or ID	S31
Barrier Height (feet)	8
Critical Design Receiver	R14
Number of benefited Residences	2
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	64
Future Noise Level (dBA)	70
Change in Noise Level (dB)	6
Noise Level with Abatement (dBA)	60
Barrier Insertion Loss (dB)	10

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0	X	\$0
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$33,000
Unmodified Barrier Allowance				\$462,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 56
Mile Post: 0.0/2.5
ALT 3

Barrier Name or ID	S35
Barrier Height (feet)	10-12
Critical Design Receiver	R17
Number of benefited Residences	14
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	66
Future Noise Level (dBA)	67
Change in Noise Level (dB)	1
Noise Level with Abatement (dBA)	62
Barrier Insertion Loss (dB)	5

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000	X	\$2,000
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$35,000
Unmodified Barrier Allowance				\$350,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 56
Mile Post: 0.0/2.5
ALT 3

Barrier Name or ID	S47
Barrier Height (feet)	10-14
Critical Design Receiver	R32
Number of benefited Residences	10
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	67
Future Noise Level (dBA)	67
Change in Noise Level (dB)	0
Noise Level with Abatement (dBA)	61
Barrier Insertion Loss (dB)	6

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0	X	\$0
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$35,000
Unmodified Barrier Allowance				\$245,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 56
Mile Post: 0.0/2.5
ALT 3

Barrier Name or ID	S20
Barrier Height (feet)	12-16
Critical Design Receiver	R45
Number of benefited Residences	7
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	65
Future Noise Level (dBA)	69
Change in Noise Level (dB)	4
Noise Level with Abatement (dBA)	64
Barrier Insertion Loss (dB)	5

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000	X	\$4,000
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000	X	\$2,000
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000	X	\$10,000
No on both	Add	\$0		-
Reasonable Allowance for Benefited Residence				\$49,000
Unmodified Barrier Allowance				\$49,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 56
Mile Post: 0.0/2.5
ALT 3

Barrier Name or ID	S34
Barrier Height (feet)	8-10
Critical Design Receiver	R46
Number of benefited Residences	1
New Hwy Construction	No
Pre 1978 residences	Yes
Existing Noise Level (dBA)	66
Future Noise Level (dBA)	70
Change in Noise Level (dB)	4
Noise Level with Abatement (dBA)	64
Barrier Insertion Loss (dB)	6

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000	X	\$4,000
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000	X	\$4,000
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000	X	\$10,000
No on both	Add	\$0		-
Reasonable Allowance for Benefited Residence				\$51,000
Unmodified Barrier Allowance				\$51,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 56
Mile Post: 0.0/2.5
ALT 3

Barrier Name or ID	S34 OPT
Barrier Height (feet)	12-14
Critical Design Receiver	R46
Number of benefited Residences	1
New Hwy Construction	No
Pre 1978 residences	Yes
Existing Noise Level (dBA)	66
Future Noise Level (dBA)	70
Change in Noise Level (dB)	4
Noise Level with Abatement (dBA)	61
Barrier Insertion Loss (dB)	9

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0	X	\$0
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000	X	\$10,000
No on both	Add	\$0		-
Reasonable Allowance for Benefited Residence				\$43,000
Unmodified Barrier Allowance				\$129,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 3

Barrier Name or ID	S569
Barrier Height (feet)	8-14
Critical Design Receiver	R5.9A
Number of benefited Residences	3
New Hwy Construction	No
Pre 1978 residences	Yes
Existing Noise Level (dBA)	67
Future Noise Level (dBA)	67
Change in Noise Level (dB)	0
Noise Level with Abatement (dBA)	62
Barrier Insertion Loss (dB)	5

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000	X	\$6,000
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000	X	\$6,000
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$45,000
Unmodified Barrier Allowance				\$225,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 3

Barrier Name or ID	S541
Barrier Height (feet)	8-14
Critical Design Receiver	R4.4
Number of benefited Residences	5
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	70
Future Noise Level (dBA)	75
Change in Noise Level (dB)	5
Noise Level with Abatement (dBA)	63
Barrier Insertion Loss (dB)	12

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000	X	\$2,000
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000	X	\$10,000
No on both	Add	\$0		-
Reasonable Allowance for Benefited Residence				\$45,000
Unmodified Barrier Allowance				\$900,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 3

Barrier Name or ID	S551
Barrier Height (feet)	14-16
Critical Design Receiver	R4.20A
Number of benefited Residences	20
New Hwy Construction	No
Pre 1978 residences	Yes
Existing Noise Level (dBA)	68
Future Noise Level (dBA)	68
Change in Noise Level (dB)	0
Noise Level with Abatement (dBA)	62
Barrier Insertion Loss (dB)	6

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000	X	\$8,000
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000	X	\$4,000
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$43,000
Unmodified Barrier Allowance				\$430,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 3

Barrier Name or ID	S557
Barrier Height (feet)	8-10
Critical Design Receiver	R4.23A
Number of benefited Residences	10
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	77
Future Noise Level (dBA)	79
Change in Noise Level (dB)	2
Noise Level with Abatement (dBA)	69
Barrier Insertion Loss (dB)	10

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000	X	\$6,000
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000	X	\$4,000
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$41,000
Unmodified Barrier Allowance				\$246,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 3

Barrier Name or ID	S561
Barrier Height (feet)	8
Critical Design Receiver	R5.1
Number of benefited Residences	6
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	75
Future Noise Level (dBA)	75
Change in Noise Level (dB)	0
Noise Level with Abatement (dBA)	64
Barrier Insertion Loss (dB)	11

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000	X	\$2,000
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000	X	\$10,000
No on both	Add	\$0		-
Reasonable Allowance for Benefited Residence				\$47,000
Unmodified Barrier Allowance				\$188,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 3

Barrier Name or ID	S563
Barrier Height (feet)	8
Critical Design Receiver	R5.5A
Number of benefited Residences	4
New Hwy Construction	No
Pre 1978 residences	Yes
Existing Noise Level (dBA)	63
Future Noise Level (dBA)	68
Change in Noise Level (dB)	5
Noise Level with Abatement (dBA)	61
Barrier Insertion Loss (dB)	7

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000	X	\$4,000
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000	X	\$4,000
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000	X	\$10,000
No on both	Add	\$0		-
Reasonable Allowance for Benefited Residence			\$49,000	
Unmodified Barrier Allowance			\$637,000	
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 3

Barrier Name or ID	S567
Barrier Height (feet)	8
Critical Design Receiver	R5.7
Number of benefited Residences	13
New Hwy Construction	No
Pre 1978 residences	Yes
Existing Noise Level (dBA)	72
Future Noise Level (dBA)	73
Change in Noise Level (dB)	1
Noise Level with Abatement (dBA)	63
Barrier Insertion Loss (dB)	10

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0	X	\$0
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000	X	\$10,000
No on both	Add	\$0		-
Reasonable Allowance for Benefited Residence				\$43,000
Unmodified Barrier Allowance				\$129,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 3

Barrier Name or ID	S569
Barrier Height (feet)	8-14
Critical Design Receiver	R5.9A
Number of benefited Residences	3
New Hwy Construction	No
Pre 1978 residences	Yes
Existing Noise Level (dBA)	67
Future Noise Level (dBA)	67
Change in Noise Level (dB)	0
Noise Level with Abatement (dBA)	62
Barrier Insertion Loss (dB)	5

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000	X	\$4,000
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$37,000
Unmodified Barrier Allowance				\$333,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 3

Barrier Name or ID	S568
Barrier Height (feet)	8
Critical Design Receiver	R5.23
Number of benefited Residences	9
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	69
Future Noise Level (dBA)	69
Change in Noise Level (dB)	0
Noise Level with Abatement (dBA)	58
Barrier Insertion Loss (dB)	11

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

County: **San Diego**
 Project Exp Auth: **11-177900**

Route: **I-5/SR56**

Mile Post: **MP 32.7/34.8 / 0.0/2.5**

Program Code: **Alternative 3**

Construction cost without abatement: **\$86,000,000**

1	2	3	4	5	6	7	8
From Worksheet A				Adjusted Barrier Allowance vs Construction Cost	Percentage of Total Barrier Allowance	Modified Barrier Allowance	Modified Allowance per Benefited Residence
Barrier ID	Adjusted Allowance for Critical Design Receiver a_i	Number of Benefited Residences n_i	Adjusted Unmodified Barrier Allowance $A_i = a_i \times n$		(col 4: $A / \Sigma A$)	($A / \Sigma A \times 0.5 \times \text{Const Cost}$)	(col 7 / col 3)
S27	\$37,000	11	\$407,000	If the total in column 4 is equal to or less than 50% of construction cost without abatement, no adjustment is necessary, otherwise continue to next three columns.	N/A	N/A	N/A
S31	\$41,000	2	\$82,000		N/A	N/A	N/A
S35	\$33,000	14	\$462,000		N/A	N/A	N/A
S47	\$35,000	10	\$350,000		N/A	N/A	N/A
S20	\$35,000	7	\$245,000		N/A	N/A	N/A
S34	\$49,000	1	\$49,000		N/A	N/A	N/A
S539	\$39,000	1	\$39,000		N/A	N/A	N/A
S541	\$45,000	5	\$225,000		N/A	N/A	N/A
S551	\$45,000	20	\$900,000		N/A	N/A	N/A
S557	\$43,000	10	\$430,000		N/A	N/A	N/A
S561	\$41,000	6	\$246,000		N/A	N/A	N/A
S563	\$47,000	4	\$188,000		N/A	N/A	N/A
S567	\$49,000	13	\$637,000		N/A	N/A	N/A
S569	\$43,000	3	\$129,000		N/A	N/A	N/A
S568	\$37,000	9	\$333,000		N/A	N/A	N/A
	Totals	116	\$4,722,000				

County: **San Diego**
Project Exp Auth: **11-177900**

Route: **I-5/SR56**

Mile Post: **MP 32.7/34.8 / 0.0/2.5**

Program Code: **Alternative 3**
S34 Option

Construction cost without abatement: **\$86,000,000**

1	2	3	4	5	6	7	8
From Worksheet A				Adjusted Barrier Allowance vs Construction Cost	Percentage of Total Barrier Allowance	Modified Barrier Allowance	Modified Allowance per Benefited Residence
Barrier ID	Adjusted Allowance for Critical Design Receiver a_i	Number of Benefited Residences n_i	Adjusted Unmodified Barrier Allowance $A_i = a_i \times n$		(col 4: $A / \Sigma A$)	($A / \Sigma A \times 0.5 \times \text{Const Cost}$)	(col 7 / col 3)
S27	\$37,000	11	\$407,000	If the total in column 4 is equal to or less than 50% of construction cost without abatement, no adjustment is necessary, otherwise continue to next three columns.	N/A	N/A	N/A
S31	\$41,000	2	\$82,000		N/A	N/A	N/A
S35	\$33,000	14	\$462,000		N/A	N/A	N/A
S47	\$35,000	10	\$350,000		N/A	N/A	N/A
S20	\$35,000	7	\$245,000		N/A	N/A	N/A
S34 OPT	\$51,000	1	\$51,000		N/A	N/A	N/A
S539	\$39,000	1	\$39,000		N/A	N/A	N/A
S541	\$45,000	5	\$225,000		N/A	N/A	N/A
S551	\$45,000	20	\$900,000		N/A	N/A	N/A
S557	\$43,000	10	\$430,000		N/A	N/A	N/A
S561	\$41,000	6	\$246,000		N/A	N/A	N/A
S563	\$47,000	4	\$188,000		N/A	N/A	N/A
S567	\$49,000	13	\$637,000		N/A	N/A	N/A
S569	\$43,000	3	\$129,000		N/A	N/A	N/A
S568	\$37,000	9	\$333,000		N/A	N/A	N/A
	Totals	116	\$4,724,000				

ALTERNATIVE 4

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				<input type="checkbox"/>
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	<input type="checkbox"/>
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	<input type="checkbox"/>
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	<input type="checkbox"/>
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000	X	\$2,000
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	<input type="checkbox"/>
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$37,000
Unmodified Barrier Allowance				\$407,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 56
Mile Post: 0.0/2.5
ALT 4

Barrier Name or ID	S27
Barrier Height (feet)	12-16
Critical Design Receiver	R9
Number of benefited Residences	11
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	62
Future Noise Level (dBA)	66
Change in Noise Level (dB)	4
Noise Level with Abatement (dBA)	60
Barrier Insertion Loss (dB)	6

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000	X	\$4,000
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000	X	\$4,000
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence			\$41,000	
Unmodified Barrier Allowance			\$82,000	
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 56
Mile Post: 0.0/2.5
ALT 4

Barrier Name or ID	S31
Barrier Height (feet)	8
Critical Design Receiver	R14
Number of benefited Residences	2
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	64
Future Noise Level (dBA)	71
Change in Noise Level (dB)	7
Noise Level with Abatement (dBA)	61
Barrier Insertion Loss (dB)	10

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0	X	\$0
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$33,000
Unmodified Barrier Allowance				\$1,023,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 56
Mile Post: 0.0/2.5
ALT 4

Barrier Name or ID	S35
Barrier Height (feet)	8-12
Critical Design Receiver	R17
Number of benefited Residences	31
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	66
Future Noise Level (dBA)	67
Change in Noise Level (dB)	1
Noise Level with Abatement (dBA)	62
Barrier Insertion Loss (dB)	5

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0	X	\$0
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$33,000
Unmodified Barrier Allowance				\$132,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 56
Mile Post: 0.0/2.5
ALT 4

Barrier Name or ID	S41
Barrier Height (feet)	12
Critical Design Receiver	R30A
Number of benefited Residences	4
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	64
Future Noise Level (dBA)	66
Change in Noise Level (dB)	2
Noise Level with Abatement (dBA)	61
Barrier Insertion Loss (dB)	5

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				<input type="checkbox"/>
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	<input type="checkbox"/>
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	<input type="checkbox"/>
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	<input type="checkbox"/>
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000	X	\$2,000
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	<input type="checkbox"/>
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$35,000
Unmodified Barrier Allowance				\$350,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 56
Mile Post: 0.0/2.5
ALT 4

Barrier Name or ID	S47
Barrier Height (feet)	12-14
Critical Design Receiver	R32
Number of benefited Residences	10
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	67
Future Noise Level (dBA)	67
Change in Noise Level (dB)	0
Noise Level with Abatement (dBA)	61
Barrier Insertion Loss (dB)	6

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000	X	\$2,000
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$37,000
Unmodified Barrier Allowance				\$259,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 56
Mile Post: 0.0/2.5
ALT 4

Barrier Name or ID	S20
Barrier Height (feet)	12-16
Critical Design Receiver	R44
Number of benefited Residences	7
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	65
Future Noise Level (dBA)	69
Change in Noise Level (dB)	4
Noise Level with Abatement (dBA)	63
Barrier Insertion Loss (dB)	6

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000	X	\$4,000
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0	X	\$0
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000	X	\$10,000
No on both	Add	\$0		-
Reasonable Allowance for Benefited Residence				\$47,000
Unmodified Barrier Allowance				\$47,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 56
Mile Post: 0.0/2.5
ALT 4

Barrier Name or ID	S34
Barrier Height (feet)	8-10
Critical Design Receiver	R46
Number of benefited Residences	1
New Hwy Construction	No
Pre 1978 residences	Yes
Existing Noise Level (dBA)	66
Future Noise Level (dBA)	70
Change in Noise Level (dB)	4
Noise Level with Abatement (dBA)	65
Barrier Insertion Loss (dB)	5

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000	X	\$4,000
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000	X	\$2,000
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000	X	\$10,000
No on both	Add	\$0		-
Reasonable Allowance for Benefited Residence				\$49,000
Unmodified Barrier Allowance				\$49,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 56
Mile Post: 0.0/2.5
ALT 4

Barrier Name or ID	S34 OPT
Barrier Height (feet)	12-14
Critical Design Receiver	R46
Number of benefited Residences	1
New Hwy Construction	No
Pre 1978 residences	Yes
Existing Noise Level (dBA)	66
Future Noise Level (dBA)	70
Change in Noise Level (dB)	4
Noise Level with Abatement (dBA)	62
Barrier Insertion Loss (dB)	8

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				<input type="checkbox"/>
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	<input type="checkbox"/>
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000	X	\$4,000
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	<input type="checkbox"/>
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	<input type="checkbox"/>
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000	X	\$2,000
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	<input type="checkbox"/>
Yes on either one	Add	\$10,000	X	\$10,000
No on both	Add	\$0		-
Reasonable Allowance for Benefited Residence				\$47,000
Unmodified Barrier Allowance				\$1,081,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 4

Barrier Name or ID	S551
Barrier Height (feet)	14-16
Critical Design Receiver	R4.12
Number of benefited Residences	23
New Hwy Construction	No
Pre 1978 residences	Yes
Existing Noise Level (dBA)	72
Future Noise Level (dBA)	70
Change in Noise Level (dB)	-2
Noise Level with Abatement (dBA)	64
Barrier Insertion Loss (dB)	6

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000	X	\$6,000
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000	X	\$6,000
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$45,000
Unmodified Barrier Allowance				\$225,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 4

Barrier Name or ID	S541
Barrier Height (feet)	8-14
Critical Design Receiver	R4.4
Number of benefited Residences	5
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	70
Future Noise Level (dBA)	75
Change in Noise Level (dB)	5
Noise Level with Abatement (dBA)	63
Barrier Insertion Loss (dB)	12

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				<input type="checkbox"/>
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	<input type="checkbox"/>
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000	X	\$4,000
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	<input type="checkbox"/>
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	<input type="checkbox"/>
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000	X	\$2,000
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	<input type="checkbox"/>
Yes on either one	Add	\$10,000	X	\$10,000
No on both	Add	\$0		-
Reasonable Allowance for Benefited Residence				\$47,000
Unmodified Barrier Allowance				\$1,081,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 4

Barrier Name or ID	S551
Barrier Height (feet)	14-16
Critical Design Receiver	R4.12
Number of benefited Residences	23
New Hwy Construction	No
Pre 1978 residences	Yes
Existing Noise Level (dBA)	72
Future Noise Level (dBA)	70
Change in Noise Level (dB)	-2
Noise Level with Abatement (dBA)	64
Barrier Insertion Loss (dB)	6

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000	X	\$8,000
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000	X	\$4,000
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$43,000
Unmodified Barrier Allowance				\$430,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 4

Barrier Name or ID	S557
Barrier Height (feet)	8-10
Critical Design Receiver	R4.23A
Number of benefited Residences	10
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	77
Future Noise Level (dBA)	79
Change in Noise Level (dB)	2
Noise Level with Abatement (dBA)	69
Barrier Insertion Loss (dB)	10

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000	X	\$6,000
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000	X	\$4,000
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$41,000
Unmodified Barrier Allowance				\$246,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 4

Barrier Name or ID	S561
Barrier Height (feet)	8
Critical Design Receiver	R5.1
Number of benefited Residences	6
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	75
Future Noise Level (dBA)	75
Change in Noise Level (dB)	0
Noise Level with Abatement (dBA)	64
Barrier Insertion Loss (dB)	11

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000	X	\$2,000
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000	X	\$10,000
No on both	Add	\$0		-
Reasonable Allowance for Benefited Residence				\$47,000
Unmodified Barrier Allowance				\$188,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 4

Barrier Name or ID	S563
Barrier Height (feet)	8
Critical Design Receiver	R5.5A
Number of benefited Residences	4
New Hwy Construction	No
Pre 1978 residences	Yes
Existing Noise Level (dBA)	63
Future Noise Level (dBA)	69
Change in Noise Level (dB)	6
Noise Level with Abatement (dBA)	61
Barrier Insertion Loss (dB)	8

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000	X	\$4,000
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000	X	\$4,000
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000	X	\$10,000
No on both	Add	\$0		-
Reasonable Allowance for Benefited Residence				\$49,000
Unmodified Barrier Allowance				\$637,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 4

Barrier Name or ID	S567
Barrier Height (feet)	8
Critical Design Receiver	R5.7
Number of benefited Residences	13
New Hwy Construction	No
Pre 1978 residences	Yes
Existing Noise Level (dBA)	72
Future Noise Level (dBA)	74
Change in Noise Level (dB)	2
Noise Level with Abatement (dBA)	63
Barrier Insertion Loss (dB)	11

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0	X	\$0
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000	X	\$10,000
No on both	Add	\$0		-
Reasonable Allowance for Benefited Residence				\$43,000
Unmodified Barrier Allowance				\$129,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 4

Barrier Name or ID	S569
Barrier Height (feet)	8-14
Critical Design Receiver	R5.9A
Number of benefited Residences	3
New Hwy Construction	No
Pre 1978 residences	Yes
Existing Noise Level (dBA)	67
Future Noise Level (dBA)	67
Change in Noise Level (dB)	0
Noise Level with Abatement (dBA)	62
Barrier Insertion Loss (dB)	5

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000	X	\$4,000
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$37,000
Unmodified Barrier Allowance				\$333,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 4

Barrier Name or ID	S568
Barrier Height (feet)	8
Critical Design Receiver	R5.23
Number of benefited Residences	9
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	69
Future Noise Level (dBA)	69
Change in Noise Level (dB)	0
Noise Level with Abatement (dBA)	58
Barrier Insertion Loss (dB)	11

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

County: **San Diego**
Project Exp Auth: **11-177900**

Route: **I-5/SR56**

Mile Post: **MP 32.7/34.8 / 0.0/2.5**

Program Code: **Alternative 4**

Construction cost without abatement: **\$86,000,000**

1	2	3	4	5	6	7	8
From Worksheet A				Adjusted Barrier Allowance vs Construction Cost	Percentage of Total Barrier Allowance	Modified Barrier Allowance	Modified Allowance per Benefited Residence
Barrier ID	Adjusted Allowance for Critical Design Receiver a_i	Number of Benefited Residences n_i	Adjusted Unmodified Barrier Allowance $A_i = a_i \times n$		(col 4: $A / \Sigma A$)	($A / \Sigma A \times 0.5 \times \text{Const Cost}$)	(col 7 / col 3)
S27	\$37,000	11	\$407,000	If the total in column 4 is equal to or less than 50% of construction cost without abatement, no adjustment is necessary, otherwise continue to next three columns.	N/A	N/A	N/A
S31	\$41,000	2	\$82,000		N/A	N/A	N/A
S35	\$33,000	31	\$1,023,000		N/A	N/A	N/A
S41	\$33,000	4	\$132,000		N/A	N/A	N/A
S47	\$35,000	10	\$350,000		N/A	N/A	N/A
S20	\$37,000	7	\$259,000		N/A	N/A	N/A
S34	\$47,000	1	\$47,000		N/A	N/A	N/A
S539	\$37,000	1	\$37,000		N/A	N/A	N/A
S541	\$45,000	5	\$225,000		N/A	N/A	N/A
S551	\$47,000	23	\$1,081,000		N/A	N/A	N/A
S557	\$43,000	10	\$430,000		N/A	N/A	N/A
S561	\$41,000	6	\$246,000		N/A	N/A	N/A
S563	\$47,000	4	\$188,000		N/A	N/A	N/A
S567	\$49,000	13	\$637,000		N/A	N/A	N/A
S569	\$43,000	3	\$129,000		N/A	N/A	N/A
S568	\$37,000	9	\$333,000		N/A	N/A	N/A
	Totals	140	\$5,606,000				

County: **San Diego**
 Project Exp Auth: **11-177900**

Route: **I-5/SR56**

Mile Post: **MP 32.7/34.8 / 0.0/2.5**

Program Code: **Alternative 4**
S34 Option

Construction cost without abatement: **\$86,000,000**

1	2	3	4	5	6	7	8
From Worksheet A				Adjusted Barrier Allowance vs Construction Cost	Percentage of Total Barrier Allowance	Modified Barrier Allowance	Modified Allowance per Benefited Residence
Barrier ID	Adjusted Allowance for Critical Design Receiver a_i	Number of Benefited Residences n_i	Adjusted Unmodified Barrier Allowance $A_i = a_i \times n$		(col 4: $A / \Sigma A$)	($A / \Sigma A \times 0.5 \times \text{Const Cost}$)	(col 7 / col 3)
S27	\$37,000	11	\$407,000	If the total in column 4 is equal to or less than 50% of construction cost without abatement, no adjustment is necessary, otherwise continue to next three columns.	N/A	N/A	N/A
S31	\$41,000	2	\$82,000		N/A	N/A	N/A
S35	\$33,000	31	\$1,023,000		N/A	N/A	N/A
S41	\$33,000	4	\$132,000		N/A	N/A	N/A
S47	\$35,000	10	\$350,000		N/A	N/A	N/A
S20	\$37,000	7	\$259,000		N/A	N/A	N/A
S34 OPT	\$49,000	1	\$49,000		N/A	N/A	N/A
S539	\$37,000	1	\$37,000		N/A	N/A	N/A
S541	\$45,000	5	\$225,000		N/A	N/A	N/A
S551	\$47,000	23	\$1,081,000		N/A	N/A	N/A
S557	\$43,000	10	\$430,000		N/A	N/A	N/A
S561	\$41,000	6	\$246,000		N/A	N/A	N/A
S563	\$47,000	4	\$188,000		N/A	N/A	N/A
S567	\$49,000	13	\$637,000		N/A	N/A	N/A
S569	\$43,000	3	\$129,000		N/A	N/A	N/A
S568	\$37,000	9	\$333,000		N/A	N/A	N/A
	Totals	140	\$5,608,000				

ALTERNATIVE 5

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				<input type="checkbox"/>
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	<input type="checkbox"/>
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	<input type="checkbox"/>
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	<input type="checkbox"/>
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000	X	\$2,000
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	<input type="checkbox"/>
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$37,000
Unmodified Barrier Allowance				\$481,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 56
Mile Post: 0.0/2.5
ALT 5

Barrier Name or ID	S27
Barrier Height (feet)	14-16
Critical Design Receiver	R6A
Number of benefited Residences	13
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	64
Future Noise Level (dBA)	69
Change in Noise Level (dB)	5
Noise Level with Abatement (dBA)	63
Barrier Insertion Loss (dB)	6

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000	X	\$4,000
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000	X	\$4,000
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$41,000
Unmodified Barrier Allowance				\$82,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 56
Mile Post: 0.0/2.5
ALT 5

Barrier Name or ID	S31
Barrier Height (feet)	8
Critical Design Receiver	R14
Number of benefited Residences	2
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	64
Future Noise Level (dBA)	71
Change in Noise Level (dB)	7
Noise Level with Abatement (dBA)	62
Barrier Insertion Loss (dB)	9

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000	X	\$2,000
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$37,000
Unmodified Barrier Allowance				\$1,332,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 56
Mile Post: 0.0/2.5
ALT 5

Barrier Name or ID	S35
Barrier Height (feet)	10-12
Critical Design Receiver	R18
Number of benefited Residences	36
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	65
Future Noise Level (dBA)	68
Change in Noise Level (dB)	3
Noise Level with Abatement (dBA)	62
Barrier Insertion Loss (dB)	6

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0	X	\$0
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$35,000
Unmodified Barrier Allowance				\$245,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 56
Mile Post: 0.0/2.5
ALT 5

Barrier Name or ID	S41
Barrier Height (feet)	10-12
Critical Design Receiver	R29
Number of benefited Residences	7
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	63
Future Noise Level (dBA)	66
Change in Noise Level (dB)	3
Noise Level with Abatement (dBA)	61
Barrier Insertion Loss (dB)	5

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000	X	\$2,000
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$35,000
Unmodified Barrier Allowance				\$385,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 56
Mile Post: 0.0/2.5
ALT 5

Barrier Name or ID	S47
Barrier Height (feet)	10-14
Critical Design Receiver	R32
Number of benefited Residences	11
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	67
Future Noise Level (dBA)	68
Change in Noise Level (dB)	1
Noise Level with Abatement (dBA)	62
Barrier Insertion Loss (dB)	6

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0	X	\$0
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence			\$35,000	
Unmodified Barrier Allowance			\$140,000	
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 56
Mile Post: 0.0/2.5
ALT 5

Barrier Name or ID	S20
Barrier Height (feet)	12-16
Critical Design Receiver	R43
Number of benefited Residences	4
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	63
Future Noise Level (dBA)	66
Change in Noise Level (dB)	3
Noise Level with Abatement (dBA)	61
Barrier Insertion Loss (dB)	5

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000	X	\$4,000
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0	X	\$0
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000	X	\$10,000
No on both	Add	\$0		-
Reasonable Allowance for Benefited Residence				\$47,000
Unmodified Barrier Allowance				\$94,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 56
Mile Post: 0.0/2.5
ALT 5

Barrier Name or ID	S34
Barrier Height (feet)	8-10
Critical Design Receiver	R46
Number of benefited Residences	2
New Hwy Construction	No
Pre 1978 residences	Yes
Existing Noise Level (dBA)	66
Future Noise Level (dBA)	71
Change in Noise Level (dB)	5
Noise Level with Abatement (dBA)	66
Barrier Insertion Loss (dB)	5

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000	X	\$4,000
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000	X	\$2,000
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000	X	\$10,000
No on both	Add	\$0		-
Reasonable Allowance for Benefited Residence			\$49,000	
Unmodified Barrier Allowance			\$98,000	
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 56
Mile Post: 0.0/2.5
ALT 5

Barrier Name or ID	S34 OPT
Barrier Height (feet)	12-14
Critical Design Receiver	R46
Number of benefited Residences	2
New Hwy Construction	No
Pre 1978 residences	Yes
Existing Noise Level (dBA)	66
Future Noise Level (dBA)	71
Change in Noise Level (dB)	5
Noise Level with Abatement (dBA)	63
Barrier Insertion Loss (dB)	8

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Table B-2.

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				<input checked="" type="checkbox"/>
Base Year 2008				\$31,000
1. Absolute Noise Levels				check one
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000	X	\$4,000
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels				check one
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction				check one
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000	X	\$2,000
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?				check one
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$37,000
Unmodified Barrier Allowance				\$37,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 5

Barrier Name or ID	S539
Barrier Height (feet)	8
Critical Design Receiver	R4.1
Number of benefited Residences	1
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	70
Future Noise Level (dBA)	72
Change in Noise Level (dB)	2
Noise Level with Abatement (dBA)	65
Barrier Insertion Loss (dB)	7

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000	X	\$6,000
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000	X	\$6,000
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$45,000
Unmodified Barrier Allowance				\$225,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 5

Barrier Name or ID	S541
Barrier Height (feet)	8, 12, & 14
Critical Design Receiver	R4.4
Number of benefited Residences	5
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	70
Future Noise Level (dBA)	75
Change in Noise Level (dB)	5
Noise Level with Abatement (dBA)	63
Barrier Insertion Loss (dB)	12

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000	X	\$4,000
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000	X	\$2,000
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000	X	\$10,000
No on both	Add	\$0		-
Reasonable Allowance for Benefited Residence				\$47,000
Unmodified Barrier Allowance				\$987,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 5

Barrier Name or ID	S551
Barrier Height (feet)	14-16
Critical Design Receiver	R4.12
Number of benefited Residences	21
New Hwy Construction	No
Pre 1978 residences	Yes
Existing Noise Level (dBA)	72
Future Noise Level (dBA)	70
Change in Noise Level (dB)	-2
Noise Level with Abatement (dBA)	64
Barrier Insertion Loss (dB)	6

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000	X	\$8,000
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000	X	\$4,000
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$43,000
Unmodified Barrier Allowance				\$430,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 5

Barrier Name or ID	S557
Barrier Height (feet)	8-10
Critical Design Receiver	R4.23A
Number of benefited Residences	10
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	77
Future Noise Level (dBA)	79
Change in Noise Level (dB)	2
Noise Level with Abatement (dBA)	69
Barrier Insertion Loss (dB)	10

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000	X	\$6,000
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000	X	\$4,000
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$41,000
Unmodified Barrier Allowance				\$246,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 5

Barrier Name or ID	S561
Barrier Height (feet)	8
Critical Design Receiver	R5.1
Number of benefited Residences	6
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	75
Future Noise Level (dBA)	75
Change in Noise Level (dB)	0
Noise Level with Abatement (dBA)	64
Barrier Insertion Loss (dB)	11

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				<input type="checkbox"/>
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	<input type="checkbox"/>
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	<input type="checkbox"/>
Less than 3 dBA	Add	\$0		-
3-7 dBA	Add	\$2,000	X	\$2,000
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	<input type="checkbox"/>
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000	X	\$2,000
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	<input type="checkbox"/>
Yes on either one	Add	\$10,000	X	\$10,000
No on both	Add	\$0		-
Reasonable Allowance for Benefited Residence				\$47,000
Unmodified Barrier Allowance				\$188,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 5

Barrier Name or ID	S563
Barrier Height (feet)	8
Critical Design Receiver	R5.5A
Number of benefited Residences	4
New Hwy Construction	No
Pre 1978 residences	Yes
Existing Noise Level (dBA)	63
Future Noise Level (dBA)	69
Change in Noise Level (dB)	6
Noise Level with Abatement (dBA)	61
Barrier Insertion Loss (dB)	8

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000		-
70-74 dBA	Add	\$4,000	X	\$4,000
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000	X	\$4,000
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000	X	\$10,000
No on both	Add	\$0		-
Reasonable Allowance for Benefited Residence			\$49,000	
Unmodified Barrier Allowance			\$637,000	
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 5

Barrier Name or ID	S567
Barrier Height (feet)	8
Critical Design Receiver	R5.7
Number of benefited Residences	13
New Hwy Construction	No
Pre 1978 residences	Yes
Existing Noise Level (dBA)	72
Future Noise Level (dBA)	74
Change in Noise Level (dB)	2
Noise Level with Abatement (dBA)	63
Barrier Insertion Loss (dB)	11

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0	X	\$0
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000	X	\$10,000
No on both	Add	\$0		-
Reasonable Allowance for Benefited Residence				\$43,000
Unmodified Barrier Allowance				\$129,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 5

Barrier Name or ID	S569
Barrier Height (feet)	8, 12, & 14
Critical Design Receiver	R5.9A
Number of benefited Residences	3
New Hwy Construction	No
Pre 1978 residences	Yes
Existing Noise Level (dBA)	67
Future Noise Level (dBA)	67
Change in Noise Level (dB)	0
Noise Level with Abatement (dBA)	62
Barrier Insertion Loss (dB)	5

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

Worksheet A

Reasonable Allowance Calculation for Noise Abatement based on Critical Design Receiver

Base Allowance				XXXX
Base Year 2008				\$31,000
1. Absolute Noise Levels			check one	XXXX
69 dBA or less	Add	\$2,000	X	\$2,000
70-74 dBA	Add	\$4,000		-
75-78 dBA	Add	\$6,000		-
More than 78 dBA	Add	\$8,000		-
2. "Build" vs Existing Noise Levels			check one	XXXX
Less than 3 dBA	Add	\$0	X	\$0
3-7 dBA	Add	\$2,000		-
8-11 dBA	Add	\$4,000		-
12 dBA or more	Add	\$6,000		-
3. Achievable Noise Reduction			check one	XXXX
Less than 6 dBA	Add	\$0		-
6-8 dBA	Add	\$2,000		-
9-11 dBA	Add	\$4,000	X	\$4,000
12 dBA or more	Add	\$6,000		-
4. Either New Construction or Pre-date 1978?			check one	XXXX
Yes on either one	Add	\$10,000		-
No on both	Add	\$0	X	\$0
Reasonable Allowance for Benefited Residence				\$37,000
Unmodified Barrier Allowance				\$333,000
Adjusted Reasonable Allowance for Benefited Residence				
Adjusted Unmodified Barrier Allowance				

Country: SD
Route: 5
Mile Post: 32.7/34.8
ALT 5

Barrier Name or ID	S568
Barrier Height (feet)	8
Critical Design Receiver	R5.23
Number of benefited Residences	9
New Hwy Construction	No
Pre 1978 residences	No
Existing Noise Level (dBA)	69
Future Noise Level (dBA)	69
Change in Noise Level (dB)	0
Noise Level with Abatement (dBA)	58
Barrier Insertion Loss (dB)	11

Adjusted reasonable allowance for Residence and Barrier must be rounded up to nearest \$1,000.

Continue to Worksheet B

County: **San Diego**
Project Exp Auth: **11-177900**

Route: **I-5/SR56**

Mile Post: **MP 32.7/34.8 / 0.0/2.5**

Program Code: **Alternative 5**

Construction cost without abatement: **\$86,000,000**

1	2	3	4	5	6	7	8
From Worksheet A				Adjusted Barrier Allowance vs Construction Cost	Percentage of Total Barrier Allowance	Modified Barrier Allowance	Modified Allowance per Benefited Residence
Barrier ID	Adjusted Allowance for Critical Design Receiver a_i	Number of Benefited Residences n_i	Adjusted Unmodified Barrier Allowance $A_i = a_i \times n$		(col 4: $A / \Sigma A$)	($A / \Sigma A \times 0.5 \times \text{Const Cost}$)	(col 7 / col 3)
S27	\$37,000	13	\$481,000	If the total in column 4 is equal to or less than 50% of construction cost without abatement, no adjustment is necessary, otherwise continue to next three columns.	N/A	N/A	N/A
S31	\$41,000	2	\$82,000		N/A	N/A	N/A
S35	\$37,000	36	\$1,332,000		N/A	N/A	N/A
S41	\$35,000	7	\$245,000		N/A	N/A	N/A
S47	\$35,000	11	\$385,000		N/A	N/A	N/A
S20	\$35,000	4	\$140,000		N/A	N/A	N/A
S34	\$47,000	2	\$94,000		N/A	N/A	N/A
S539	\$37,000	1	\$37,000		N/A	N/A	N/A
S541	\$45,000	5	\$225,000		N/A	N/A	N/A
S551	\$47,000	21	\$987,000		N/A	N/A	N/A
S557	\$43,000	10	\$430,000		N/A	N/A	N/A
S561	\$41,000	6	\$246,000		N/A	N/A	N/A
S563	\$47,000	4	\$188,000		N/A	N/A	N/A
S567	\$49,000	13	\$637,000		N/A	N/A	N/A
S569	\$43,000	3	\$129,000		N/A	N/A	N/A
S568	\$37,000	9	\$333,000		N/A	N/A	N/A
	Totals	147	\$5,971,000				

County: **San Diego**
Project Exp Auth: **11-177900**

Route: **I-5/SR56**

Mile Post: **MP 32.7/34.8 / 0.0/2.5**

Program Code: **Alternative 5**
S34 Option

Construction cost without abatement: **\$86,000,000**

1	2	3	4	5	6	7	8
From Worksheet A				Adjusted Barrier Allowance vs Construction Cost	Percentage of Total Barrier Allowance	Modified Barrier Allowance	Modified Allowance per Benefited Residence
Barrier ID	Adjusted Allowance for Critical Design Receiver a_i	Number of Benefited Residences n_i	Adjusted Unmodified Barrier Allowance $A_i = a_i \times n$		(col 4: $A / \Sigma A$)	($A / \Sigma A \times 0.5 \times$ Const Cost)	(col 7 /col 3)
S27	\$37,000	13	\$481,000	If the total in column 4 is equal to or less than 50% of construction cost without abatement, no adjustment is necessary, otherwise continue to next three columns.	N/A	N/A	N/A
S31	\$41,000	2	\$82,000		N/A	N/A	N/A
S35	\$37,000	36	\$1,332,000		N/A	N/A	N/A
S41	\$35,000	7	\$245,000		N/A	N/A	N/A
S47	\$35,000	11	\$385,000		N/A	N/A	N/A
S20	\$35,000	4	\$140,000		N/A	N/A	N/A
S34 OPT	\$49,000	2	\$98,000		N/A	N/A	N/A
S539	\$37,000	1	\$37,000		N/A	N/A	N/A
S541	\$45,000	5	\$225,000		N/A	N/A	N/A
S551	\$47,000	21	\$987,000		N/A	N/A	N/A
S557	\$43,000	10	\$430,000		N/A	N/A	N/A
S561	\$41,000	6	\$246,000		N/A	N/A	N/A
S563	\$47,000	4	\$188,000		N/A	N/A	N/A
S567	\$49,000	13	\$637,000		N/A	N/A	N/A
S569	\$43,000	3	\$129,000		N/A	N/A	N/A
S568	\$37,000	9	\$333,000		N/A	N/A	N/A
	Totals	147	\$5,975,000				